



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Note to Reader
January 15, 1998

Background: As part of its effort to involve the public in the implementation of the Food Quality Protection Act of 1996 (FQPA), which is designed to ensure that the United States continues to have the safest and most abundant food supply. EPA is undertaking an effort to open public dockets on the organophosphate pesticides. These dockets will make available to all interested parties documents that were developed as part of the U.S. Environmental Protection Agency's process for making reregistration eligibility decisions and tolerance reassessments consistent with FQPA. The dockets include preliminary health assessments and, where available, ecological risk assessments conducted by EPA, rebuttals or corrections to the risk assessments submitted by chemical registrants, and the Agency's response to the registrants' submissions.

The analyses contained in this docket are preliminary in nature and represent the information available to EPA at the time they were prepared. Additional information may have been submitted to EPA which has not yet been incorporated into these analyses, and registrants or others may be developing relevant information. It's common and appropriate that new information and analyses will be used to revise and refine the evaluations contained in these dockets to make them more comprehensive and realistic. The Agency cautions against premature conclusions based on these preliminary assessments and against any use of information contained in these documents out of their full context. Throughout this process, If unacceptable risks are identified, EPA will act to reduce or eliminate the risks.

There is a 60 day comment period in which the public and all interested parties are invited to submit comments on the information in this docket. Comments should directly relate to this organophosphate and to the information and issues available in the information docket. Once the comment period closes, EPA will review all comments and revise the risk assessments, as necessary.

These preliminary risk assessments represent an early stage in the process by which EPA is evaluating the regulatory requirements applicable to existing pesticides. Through this opportunity for notice and comment, the Agency hopes to advance the openness and scientific soundness underpinning its decisions. This process is designed to assure that America continues to enjoy the safest and most abundant food supply. Through implementation of EPA's tolerance reassessment program under the Food Quality Protection Act, the food supply will become even safer. Leading health experts recommend that all people eat a wide variety of foods, including at least five servings of fruits and vegetables a day.

Note: This sheet is provided to help the reader understand how refined and developed the pesticide file is as of the date prepared, what if any changes have occurred recently, and what new information, if any, is expected to be included in the analysis before decisions are made. **It is not meant to be a summary of all current information regarding the chemical.** Rather, the sheet provides some context to better understand the substantive material in the docket (RED chapters, registrant rebuttals, Agency responses to rebuttals, etc.) for this pesticide.

Further, in some cases, differences may be noted between the RED chapters and the Agency's comprehensive reports on the hazard identification information and safety factors for all organophosphates. In these cases, information in the comprehensive reports is the most current and will, barring the submission of more data that the Agency finds useful, be used in the risk assessments.



Jack E. Housenger, Acting Director
Special Review and Reregistration Division

282



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

March 30, 1998

MEMORANDUM

SUBJECT: Review of Parathion Incident Reports
DP Barcode D242998, Chemical #057501, Reregistration
Case #0155

FROM: Jerome Blondell, Ph.D., Health Statistician
Chemistry and Exposure Branch 2
Health Effects Division (7509C)

THRU: Susan V. Hummel, Senior Scientist
Chemistry and Exposure Branch 2
Health Effects Division (7509C)

TO: Jonathan Becker, Environmental Health Specialist
Reregistration Branch 2
Health Effects Division (7509C)

BACKGROUND

Late in 1991 EPA reached a settlement agreement on parathion that severely limited its use. Use was limited to nine field crops including alfalfa, barley, corn, canola, cotton, sorghum, soybeans, sunflower, and wheat. Application could only be applied aerially and closed mixing/loading systems were required. No hand labor was permitted in fields to which parathion had been applied. This review of incidents only covers the time period since the settlement agreement went into effect.

The following data bases have been consulted for the poisoning incident data on the active ingredient parathion (PC Code: 057501):

1) OPP Incident Data System (IDS) - reports of incidents from various sources, including registrants, other federal and state health and environmental agencies and individual consumers, submitted to OPP since 1992. Reports submitted to the Incident Data System represent anecdotal reports or allegations only, unless otherwise stated. Typically no conclusions can be drawn implicating the pesticide as a cause of any of the reported health effects. Nevertheless, sometimes with enough cases and/or enough

documentation risk mitigation measures may be suggested.

2) Poison Control Centers - as the result of Data-Call-Ins issued in 1993, OPP received Poison Control Center data covering the years 1985 through 1992 for 28 organophosphate and carbamate chemicals. Most of the national Poison Control Centers (PCCs) participate in a national data collection system, the Toxic Exposure Surveillance System which obtains data from about 70 centers at hospitals and universities. PCCs provide telephone consultation for individuals and health care providers on suspected poisonings, involving drugs, household products, pesticides, etc.

3) California Department of Food and Agriculture (replaced by the Department of Pesticide Regulation in 1991) - California has collected uniform data on suspected pesticide poisonings since 1982. Physicians are required, by statute, to report to their local health officer all occurrences of illness suspected of being related to exposure to pesticides. The majority of the incidents involve workers. Information on exposure (worker activity), type of illness (systemic, eye, skin, eye/skin and respiratory), likelihood of a causal relationship, and number of days off work and in the hospital are provided.

PARATHION REVIEW

I. Incident Data System

Only cases involving exposure occurring since 1991 are reported below.

Incident#3599-1

The Minnesota Department of Agriculture reported on a survey of enforcement agencies in 32 States of the over 1600 complaints of spray drift investigated for 1993-1995. Only one was reported to be due to parathion. It is not known if this case resulted in human exposure or symptoms.

Incident #3965-1

The South Dakota Department of Agriculture reported one potential human exposure resulting from drift from an application to a sunflower field. Health effects, if any, were not reported.

II. Poison Control Center Data

Parathion was not one of 28 chemicals for which Poison Control Center (PCC) data were requested. Also the data collected cover

1985 through 1992 and only data from 1992, since the settlement agreement, would be of interest for the current analysis.

III. California Data

California reported on six incidents involving parathion in 1992. No incidents have been reported for 1993 through 1996.

Three of the incidents involved drift from a plum orchard where two other pesticides (copper hydroxide and petroleum oil) were also involved. The pesticide responsible for the health effects was not determined, but the applicator was fined for misuse.

Two other incidents involved applicators working on or in a contaminated spray tank containing parathion and copper hydroxide. The pesticide responsible for the health effects was not determined.

In one incident worker was standing about 20 feet away from a spray rig that was being steam cleaned. Some of the parathion landed on the worker's face and he immediately felt ill. Specific symptoms were not reported. He was treated by a physician with atropine and 2-Pam and was off work for eight days.

IV. Conclusions

A very small number of parathion cases have been reported since the settlement agreement in 1991. In most cases the existence of health effects, if any, is not documented. For the incidents that are reported either spray drift or equipment maintenance are the principle sources of exposure.

V. Recommendations

No specific measures to reduce risk to handlers of parathion are recommended based on the small number of reported cases. Surveillance for new cases, especially involving spray drift and equipment maintenance should continue.

cc: Correspondence
Parathion file (chemical no. 057501)
SRRD - William Sproat (7508W)

RDI: BRSrSci:SHummel: